

- 1.** First check the operating direction of the valve and, if necessary, change the operating direction of the motor as follows:

If the valve opens clockwise:



The switches under the cover should be in the lower position (factory setting).



If the valve opens counterclockwise:

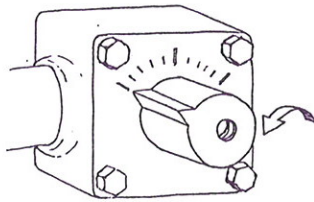


The switches under the cover should be in the upper position (move the switches



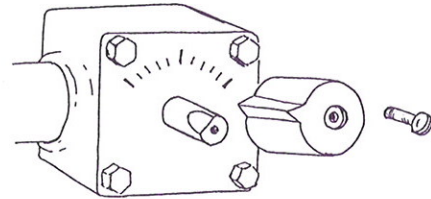
If you are not sure of the operating direction of the valve, see the additional instructions (Esbe/Termomix).

2.



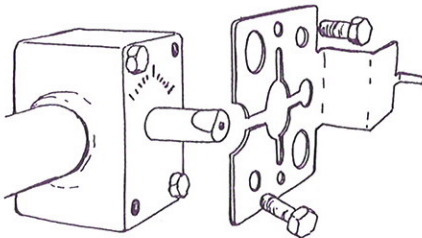
Using the manual control knob, turn the valve to the extreme left position.

3.



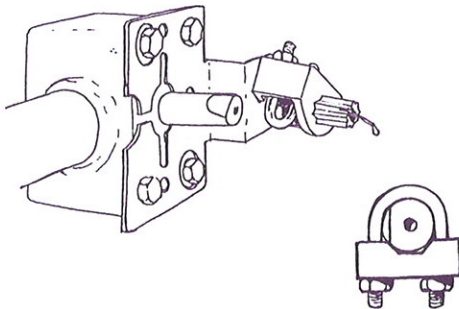
Remove the manual control knob.

4.



Fasten the installation bracket in the position shown using two of the valve cover screws. The installation bracket has several holes. Use the ones that match the valve type.

5.



Install the adapter on the valve axle. If the end of the axle is tapered, position the adapter to give maximum contact between the fastening clamp and the axle. Make sure the adapter is not installed crooked. Be careful not to turn the valve axle during installation.



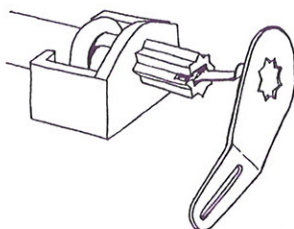
Correct



Incorrect

The star pattern of the adapter must be at a right angle as shown.

6.



Place the manual control lever on the axle of the adapter so the indicator points in the 8 o'clock position. The bent end of the lever must face the valve.

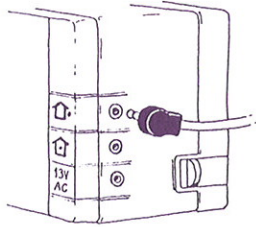
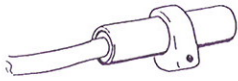
7.

Press the controller in place. Note! Press the controller against the adapter spring at the same time as you press the controller into place.

8.

Use the manual control lever to check that the valve turns freely over the full range of movement (90°C). You must press the manual control button while you are turning the manual control lever.

EH-80

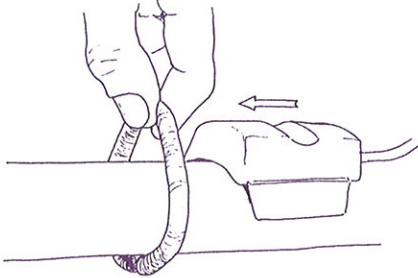


WIRING INSTRUCTIONS

Install the outdoor sensor in a shady place on the north wall of the house. The cable can be shortened or lengthened, if necessary. Use a screw coupling to lengthen the cable. (No special requirements are placed on the type of cable used.)

Install the cable neatly, using small cable fasteners, plastic lock-ties, protective conduit, etc. Insert the plug of the outdoor sensor cable into the top connector. The EH-80 controller will operate without an outdoor sensor, if you so desire. In that case, however, the TMR/P room compensation unit must be connected.

(The outgoing water sensor must always be connected.)



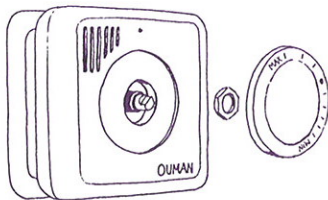
Install the outgoing water sensor (surface-mounted sensor) on the surface of the pipe that enters the circuit as follows:

Place the fastening spring around the pipe 0.5 ... 1.5 m from the valve. Spread heat-conducting silicon grease on the bottom surface of the surface-mounted sensor. Install the sensor underneath the spring.

Install the transformer cable neatly and insert the plug into the bottom connector (13 VAC).

Plug the power supply into a power outlet.

TMR/P



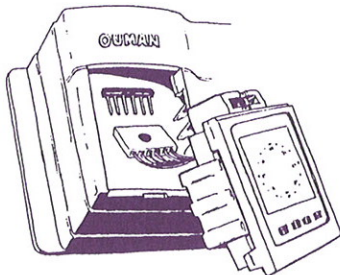
TMR/P Room compensation unit (optional) Installation and wiring instructions

The TMR/P room compensation unit should be installed in a central place in the house. Do not install it on an outer wall or in direct sunlight. A suitable place is often in the entryway.

Use ordinary weak current cable. Connect the cable to the screw coupling of the connecting cable junction box supplied in the TMR/P package. Polarity is not important.

Insert the plug of the connecting cable into the middle connector of the controller.

KS/80



KS/80 Timer module (optional) Installation and wiring instructions

The KS/80 timer module that controls temperature drops is easily installed afterward in the EH-80 heat control system.

Remove the cover of the controller. Use a screwdriver or a coin, if necessary.

Insert the plug of the timer module cable into the connector of the controller, making sure the mark on the plug faces up.

Press the KS/80 module into place on the controller (upper edge first).

NOTE! The timer contains an environmentally friendly lithium battery in case of a short power failure. The battery will be disconnected if the 13VAC power supply plug is disconnected, in which case the time and programs will be erased. The timer back-up battery will continue operating even if there is no voltage at the power outlet or the transformer is disconnected from the power outlet. The battery is replaceable.

ADDITIONAL INSTRUCTIONS

The range of movement of boiler valves is mechanically limited to 90°. Therefore, it is easy to find the limits by turning the valve to the extreme limits using the manual control knob or the valve axle.

Sometimes it may be difficult to determine the operating direction of a 3-way valve installed in the network. This may be the case if the manual control knob is missing or the scale plate of the valve is installed incorrectly.

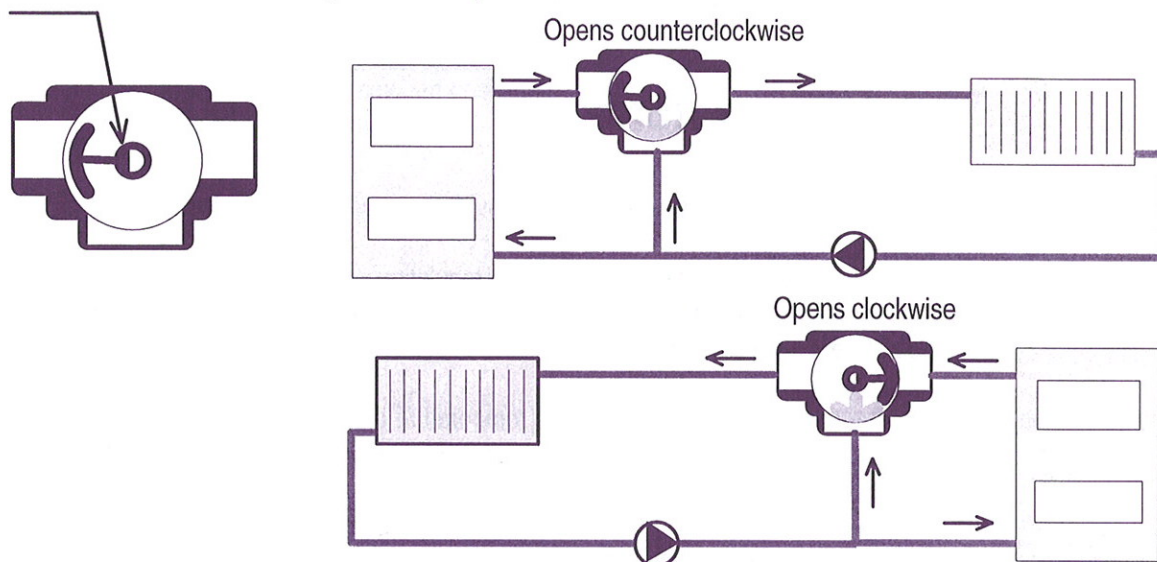
To make it easier to determine the direction, a few hints are given below for the most common valves on the market (Esbe and Termomix):

ESBE (3 MG)

The slide of the valve can be turned 360°. Therefore, you must make sure the valve is turned to the left side of its open-closed operating range when you install the controller.

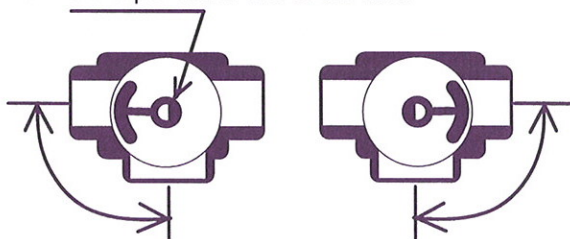
The taper at the end of the valve axle always faces the slide.

(The branch on the side of the taper is closed.)



TERMOMIX

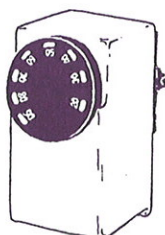
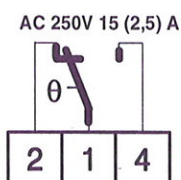
The slide of the valve is always on the opposite side of the taper at the end of the axle.



To change the operating range:

The operating range of the Termomix valve is changed for different networks by changing the position of the valve cover. If you must change the operating range of the valve while it is connected to the network, close the shut-off valves to avoid loss of water from the network. Loosen the scale plate and cover of the valve (4 screws). Pull the cover off the axle and reinstall it in a different position. Close the cover.

HOUSES WITH FLOOR HEATING



In houses with floor heating, it is important to make sure excessively hot water does not enter the network, because that may damage the structures or coverings. A thermostat that stops the circulation pump in case of overheating must be installed on the outgoing water pipe. Ouman Oy can supply you with a suitable surface-mounted thermostat, C01A. Set the MAX value to 40...45°C and the MIN value to 20...25°C.

Model	Adjustable range °C	Difference range fixed, °C	Housing temp. °C
C01A	+20...+90	8	-35...+120

HINTS FOR FIRST-TIME OPERATION

Make the basic settings according to the user's instruction booklet.

If you do not have a room compensation unit (TMR/P), the following general instructions apply:

If your house is equipped with thermostatically controlled radiators, turn the thermostats all the way open. Adjust the basic setting and fine adjustment of the EH-80 to obtain a room temperature that is about 1 °C higher than the actual room temperature you would like.

Then, turn down the radiator thermostats or floor heating room thermostats to obtain the desired room temperature. This procedure will prevent the room temperature from dropping on windy days, because the radiator thermostats or floor heating room thermostats will be able to increase the heating level.

If your house is equipped with a TMR/P room compensation unit, it can raise or lower the heating level of the whole house as needed, and therefore the above-mentioned extra heating capacity in the network is not necessary.

FAULT SITUATIONS

- The valve is stiff Clean the axle of the valve and the hole through the cover flange, and replace the O-ring axle seals.
- The heat fluctuates The floor heating thermostats may close the regulating valve, stopping normal water circulation if the outgoing water temperature is too high. This will cause fluctuation in the outgoing water temperature. Lower the setting.
- Insufficient heat Make sure enough heat is available (the temperature of the boiler or accumulator is higher than that of the outgoing water). Make sure there is enough pressure in the network and the circulation pump is running.
- Faulty controller If the controller is faulty, contact Ouman Oy.
If the controller needs to be serviced, disconnect the connectors and remove the unit from the valve axle. Place the controller in a box along with your name and address and a description of the fault, and mail it to the factory.
- Guarantee Ouman Oy guarantees the EH-80 for three years.
The guarantee covers servicing and parts at the Ouman Oy factory in Kempele. The guarantee is void if the unit has been mechanically damaged. The guarantee does not cover consequential damage or any expense involved in troubleshooting, removing, sending or reinstalling the unit.

Table of resistances for sensors used with the OUMAN EH-80:

°C	Ohm	°C	Ohm
-20	95 890	10	19 860
-15	72 230	15	15 690
-10	54 890	20	12 490
-5	42 070	30	8 060
0	32 510	40	5 331
5	25 310	50	3 606

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OUMAN FINLAND OY

C Pääkonttori ja Etelä-Suomen
T tehdas myyntikonttori
Voimatie 6 Upseerinkatu 1
T 90440 KEMPELE 02600 ESPOO
Puh. 0424 840 1 Puh. 0424 840 202
F Fax 0424 840 201 Fax 0424 840 203
www.ouman.fi